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## PRELIMINARY REPORT INDUSTRY SERIES

# 1987 Census of Manufactures

MC87-I-26C(P)  
Issued August 1989

### CONVERTED PAPER AND PAPERBOARD PRODUCTS, EXCEPT CONTAINERS AND BOXES

Industries 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, and 2679

#### INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.<sup>1</sup>

#### INDUSTRY 2671, PAPER COATED AND LAMINATED, PACKAGING

In the 1987 Census of Manufactures, Industry 2671, Paper Coated and Laminated, Packaging, had employment of 15.2 thousand.

The total value of shipments for establishments classified in this industry was \$2.4 billion.

In 1987, establishments in this industry accounted for 82 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$2.5 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.5 billion in 1987. Data on specific materials consumed appear in table 3.

#### INDUSTRY 2672, PAPER COATED AND LAMINATED, N.E.C.

In the 1987 Census of Manufactures, Industry 2672, Paper Coated and Laminated, N.E.C., had employment of 26.9 thousand.

The total value of shipments for establishments classified in this industry was \$4.9 billion.

In 1987, establishments in this industry accounted for 80 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$5.3 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$2.6 billion in 1987. Data on specific materials consumed appear in table 3.

#### INDUSTRY 2673, BAGS: PLASTICS, LAMINATED, AND COATED

In the 1987 Census of Manufactures, Industry 2673, Bags: Plastics, Laminated, and Coated, had employment of 37.1 thousand.

The total value of shipments for establishments classified in this industry was \$4.7 billion.

In 1987, establishments in this industry accounted for 91 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$4.0 billion in 1987.

<sup>1</sup>Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call Sue Carter (301) 763-2510.



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The cost of materials and services used by establishments in this industry amounted to \$2.5 billion in 1987. Data on specific materials consumed appear in table 3.

## **INDUSTRY 2674, BAGS: UNCOATED PAPER AND MULTIWALL**

In the 1987 Census of Manufactures, Industry 2674, Bags: Uncoated Paper and Multiwall, had employment of 17.1 thousand.

The total value of shipments for establishments classified in this industry was \$2.4 billion.

In 1987, establishments in this industry accounted for 95 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$2.3 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.6 billion in 1987. Data on specific materials consumed appear in table 3.

## **INDUSTRY 2675, DIE-CUT PAPER AND BOARD**

In the 1987 Census of Manufactures, Industry 2675, Die-Cut Paper and Board, had employment of 15.5 thousand. The employment figure was 3 percent below the 15.9 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$1.7 billion.

In 1987, establishments in this industry accounted for 88 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 91. The products primary to this industry appear in table 2 and aggregated to \$1.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.1 billion in 1987. Data on specific materials consumed appear in table 3.

## **INDUSTRY 2676, SANITARY PAPER PRODUCTS**

In the 1987 Census of Manufactures, Industry 2676, Sanitary Paper Products, had employment of 38.1 thousand. The employment figure was 4 percent above the 36.7 thousand reported in 1982. Compared with 1986, employment in 1987 increased 1 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$11.6 billion.

In 1987, establishments in this industry accounted for 99 percent of products considered primary to the industry regardless of the industry in which they were produced

(coverage ratio). In 1982, the coverage ratio was 98. The products primary to this industry appear in table 2 and aggregated to \$11.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$5.4 billion in 1987. Data on specific materials consumed appear in table 3.

## **INDUSTRY 2677, ENVELOPES**

In the 1987 Census of Manufactures, Industry 2677, Envelopes, had employment of 27.9 thousand. The employment figure was 14 percent above the 24.4 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$2.6 billion.

In 1987, establishments in this industry accounted for 96 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 94. The products primary to this industry appear in table 2 and aggregated to \$2.5 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.4 billion in 1987. Data on specific materials consumed appear in table 3.

## **INDUSTRY 2678, STATIONERY PRODUCTS**

In the 1987 Census of Manufactures, Industry 2678, Stationery Products, had employment of 11.5 thousand. The employment figure was 9 percent below the 12.6 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$1.2 billion.

In 1987, establishments in this industry accounted for 75 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 73. The products primary to this industry appear in table 2 and aggregated to \$1.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$694.6 million in 1987. Data on specific materials consumed appear in table 3.

## **INDUSTRY 2679, CONVERTED PAPER PRODUCTS, N.E.C.**

In the 1987 Census of Manufactures, Industry 2679, Converted Paper Products, N.E.C., had employment of 30.7 thousand. The employment figure was 1 percent above the 30.4 thousand reported in 1982. Compared with 1986, employment in 1987 increased 8 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$3.7 billion.

In 1987, establishments in this industry accounted for 89 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 80. The products primary to this industry appear in table 2 and aggregated to \$3.5 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.8 billion in 1987. Data on specific materials consumed appear in table 3.

## ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.

n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and tons, are used in the customary sense.

## CONTACTS FOR DATA USERS

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Census/ASM		
Durables	Kenneth Hansen	(301) 763-7304
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Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analysis and Forecasts	International Trade Administration	(202) 377-4356

Table 1. **Historical Statistics for the Industry: 1987 and Earlier Years**

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year <sup>1</sup>	Com- panies <sup>2</sup> (no.)	All establishments <sup>3</sup>		All employees		Production workers			Value added by manufac- ture <sup>4</sup> (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expendi- tures <sup>4</sup> (million dollars)	End-of- year inven- tories <sup>4</sup> (million dollars)	Ratios		
		Total (no.)	With 20 employees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Speci- aliza- tion (per- cent)	Cover- age (per- cent)	
<b>INDUSTRY 2671, PAPER COATED AND LAMINATED, PACKAGINGS<sup>5</sup></b>																
1987 Census	(NA)	118	110	15.2	412.2	10.6	22.6	258.9	1 006.4	1 450.5	2 433.1	129.3	356.8	85	82	
<b>INDUSTRY 2672, PAPER COATED AND LAMINATED, N.E.C.<sup>s</sup></b>																
1987 Census	(NA)	405	224	26.9	722.4	18.5	39.3	433.6	2 310.7	2 603.9	4 900.8	166.4	596.7	92	80	
<b>INDUSTRY 2673, BAGS: PLASTICS, LAMINATED, AND COATED<sup>s</sup></b>																
1987 Census	(NA)	475	300	37.1	796.3	29.4	61.0	549.7	2 240.7	2 453.7	4 685.1	199.5	600.5	82	91	
<b>INDUSTRY 2674, BAGS: UNCOATED PAPER AND MULTIWALL<sup>s</sup></b>																
1987 Census	(NA)	132	111	17.1	346.4	14.3	29.0	263.9	869.0	1 585.1	2 438.8	45.7	325.2	94	95	
<b>INDUSTRY 2675, DIE-CUT PAPER AND BOARD<sup>6</sup></b>																
1987 Census	(NA)	393	169	15.5	304.0	12.3	24.7	201.7	664.6	1 081.7	1 739.2	29.4	215.2	90	88	
1986 ASM	(NA)	328.0	14.0	26.7	218.2	788.4	1 011.6	1 794.8	31.0	235.9	(NA)	(NA)	(NA)	(NA)	(NA)	
1985 ASM	(NA)	302.2	13.6	25.8	204.6	677.9	1 052.9	1 730.3	35.0	232.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1984 ASM	(NA)	300.4	14.1	27.1	198.6	838.0	1 119.0	1 931.3	46.7	226.5	(NA)	(NA)	(NA)	(NA)	(NA)	
1983 ASM	(NA)	271.3	13.1	24.7	185.9	813.3	1 088.3	1 897.8	730.4	207.3	(NA)	(NA)	(NA)	(NA)	(NA)	
1982 Census	358	398	171	15.9	245.9	12.6	23.7	168.6	708.7	975.4	1 680.1	32.7	191.5	91	91	
1981 ASM	(NA)	258.1	13.2	24.9	166.8	683.5	1 004.6	1 676.6	723.2	179.4	(NA)	(NA)	(NA)	(NA)	(NA)	
1980 ASM	(NA)	229.3	12.7	24.0	147.3	610.2	857.0	1 453.5	741.0	158.5	(NA)	(NA)	(NA)	(NA)	(NA)	
1979 ASM	(NA)	217.2	13.1	25.2	144.0	649.7	836.4	1 468.2	732.7	155.3	(NA)	(NA)	(NA)	(NA)	(NA)	
1978 ASM	(NA)	194.8	11.8	23.1	129.6	477.8	716.4	1 188.6	26.4	118.3	(NA)	(NA)	(NA)	(NA)	(NA)	
1977 Census	316	371	141	14.3	174.6	11.3	22.7	119.6	429.5	640.9	1 057.7	15.3	114.3	88	84	
1976 ASM	(NA)	169.4	11.8	23.2	112.8	402.6	626.4	1 027.3	728.6	98.9	(NA)	(NA)	(NA)	(NA)	(NA)	
1975 ASM	(NA)	155.8	11.5	22.4	105.5	373.0	566.3	942.9	717.1	97.8	(NA)	(NA)	(NA)	(NA)	(NA)	
1974 ASM	(NA)	159.3	12.9	25.5	109.2	394.3	534.1	923.3	23.3	105.5	(NA)	(NA)	(NA)	(NA)	(NA)	
1973 ASM	(NA)	145.0	12.2	24.7	99.1	331.4	421.6	747.4	12.9	67.5	(NA)	(NA)	(NA)	(NA)	(NA)	
1972 Census	311	374	159	15.2	132.5	11.8	23.7	90.5	301.6	375.7	676.3	10.6	57.7	89	89	
<b>INDUSTRY 2676, SANITARY PAPER PRODUCTS<sup>6</sup></b>																
1987 Census	(NA)	129	108	38.1	1 143.8	29.5	61.8	851.5	6 267.9	5 436.8	11 593.0	429.0	807.4	96	99	
1986 ASM	(NA)	123.3	29.4	60.8	834.8	5 913.2	5 256.3	11 153.2	466.0	701.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1985 ASM	(NA)	1045.7	30.0	61.1	785.7	5 630.3	5 132.2	10 751.3	486.7	683.1	(NA)	(NA)	(NA)	(NA)	(NA)	
1984 ASM	(NA)	900.4	28.4	56.9	754.0	4 992.9	5 351.6	10 326.8	312.8	674.4	(NA)	(NA)	(NA)	(NA)	(NA)	
1983 ASM	(NA)	36.7	28.4	673.0	4 332.7	4 925.5	9 239.7	372.6	646.1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	
1982 Census	84	138	103	36.7	863.3	28.8	59.0	641.3	4 341.0	4 736.6	9 086.0	271.1	640.0	94	98	
1981 ASM	(NA)	804.6	28.9	58.4	599.5	3 654.0	4 670.4	8 345.8	248.2	614.5	(NA)	(NA)	(NA)	(NA)	(NA)	
1980 ASM	(NA)	740.0	29.5	59.5	549.4	3 552.4	4 176.2	7 636.2	250.9	668.1	(NA)	(NA)	(NA)	(NA)	(NA)	
1979 ASM	(NA)	660.1	30.2	61.2	492.7	3 047.9	3 608.0	6 615.2	265.4	569.8	(NA)	(NA)	(NA)	(NA)	(NA)	
1978 ASM	(NA)	562.3	27.7	55.2	414.2	2 658.2	2 983.6	5 590.7	210.6	477.0	(NA)	(NA)	(NA)	(NA)	(NA)	
1977 Census	72	120	89	34.5	509.1	27.4	54.5	381.8	2 194.5	2 781.5	4 921.2	199.1	409.9	93	99	
1976 ASM	(NA)	439.7	26.5	52.9	327.0	1 809.0	2 601.7	4 409.7	108.4	333.2	(NA)	(NA)	(NA)	(NA)	(NA)	
1975 ASM	(NA)	381.0	25.7	51.3	284.0	1 606.1	2 297.7	3 883.9	121.2	331.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1974 ASM	(NA)	345.0	25.7	51.8	260.1	1 435.6	1 876.3	3 265.4	65.2	302.3	(NA)	(NA)	(NA)	(NA)	(NA)	
1973 ASM	(NA)	290.5	23.4	46.3	222.2	987.3	1 348.0	2 325.3	109.0	185.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1972 Census	74	108	85	26.3	256.1	21.8	43.6	197.2	882.8	1 197.8	2 071.8	119.6	155.0	95	97	
<b>INDUSTRY 2677, ENVELOPES<sup>6</sup></b>																
1987 Census	(NA)	298	217	27.9	615.5	21.2	44.0	408.9	1 203.1	1 416.2	2 620.5	61.8	306.2	98	96	
1986 ASM	(NA)	545.4	19.2	40.3	370.7	1 048.1	1 292.3	2 336.7	72.8	272.1	(NA)	(NA)	(NA)	(NA)	(NA)	
1985 ASM	(NA)	503.4	18.6	39.0	343.4	991.6	1 164.3	2 147.4	77.1	251.0	(NA)	(NA)	(NA)	(NA)	(NA)	
1984 ASM	(NA)	504.4	19.7	40.5	342.4	1 016.5	1 166.1	2 169.3	763.5	254.4	(NA)	(NA)	(NA)	(NA)	(NA)	
1983 ASM	(NA)	464.7	19.3	38.6	305.4	907.0	999.5	1 888.1	32.6	239.3	(NA)	(NA)	(NA)	(NA)	(NA)	
1982 Census	196	296	216	24.4	428.7	19.0	37.0	287.5	853.6	919.9	1 771.3	45.1	210.4	98	94	
1981 ASM	(NA)	393.8	20.3	39.8	268.8	770.7	837.1	1 600.7	38.1	182.6	(NA)	(NA)	(NA)	(NA)	(NA)	
1980 ASM	(NA)	362.0	20.4	39.6	246.9	741.1	734.1	1 460.4	55.2	177.9	(NA)	(NA)	(NA)	(NA)	(NA)	
1979 ASM	(NA)	329.8	19.8	38.8	225.7	665.7	648.6	1 303.6	38.7	155.8	(NA)	(NA)	(NA)	(NA)	(NA)	
1978 ASM	(NA)	295.6	17.9	35.5	200.2	556.0	569.3	1 120.7	29.3	131.4	(NA)	(NA)	(NA)	(NA)	(NA)	
1977 Census	182	265	184	22.6	270.0	17.6	34.6	182.4	503.4	493.4	990.5	22.9	122.2	97	93	
1976 ASM	(NA)	247.0	16.8	33.0	163.4	440.6	434.0	870.2	22.7	109.1	(NA)	(NA)	(NA)	(NA)	(NA)	
1975 ASM	(NA)	233.7	16.9	33.0	152.0	426.9	399.9	829.6	19.1	107.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1974 ASM	(NA)	235.3	19.3	38.2	159.5	472.2	405.9	868.0	19.2	122.3	(NA)	(NA)	(NA)	(NA)	(NA)	
1973 ASM	(NA)	210.4	18.8	38.1	145.7	382.4	312.2	690.1	21.1	92.5	(NA)	(NA)	(NA)	(NA)	(NA)	
1972 Census	178	247	183	22.9	194.6	18.4	37.3	134.7	347.1	276.1	620.8	17.4	73.5	96	95	
<b>INDUSTRY 2678, STATIONERY PRODUCTS<sup>6</sup></b>																
1987 Census	(NA)	189	93	11.5	211.4	8.6	16.6	138.4	530.3	694.6	1 229.2	25.4	257.7	74	75	
1986 ASM	(NA)	229.4	9.5	17.5	142.9	515.8	711.1	1 200.8	743.5	277.6	(NA)	(NA)	(NA)	(NA)	(NA)	
1985 ASM	(NA)	228.3	9.7	18.4	151.5	491.0	620.7	1 101.5	748.9	242.9	(NA)	(NA)	(NA)	(NA)	(NA)	
1984 ASM	(NA)	232.7	10.3	20.1	154.3	486.3	701.5	1 172.8	742.2	234.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1983 ASM	(NA)	209.9	9.9	18.4	140.1	481.2	665.0	1 132.2	720.8	199.0	(NA)	(NA)	(NA)	(NA)	(NA)	
1982 Census	194	214	112	12.6	193.1	9.5	18.3	127.1	433.1	600.7	1 034.0	21.4	177.2	79	73	
1981 ASM	(NA)	168.6	9.0	17.3	110.4	235.7	666.2	892.9	713.1	144.7	(NA)	(NA)	(NA)	(NA)	(NA)	
1980 ASM	(NA)	172.6	9.9	19.1	112.1	219.6	625.5	835.6	12.7	140.4	(NA)	(NA)	(NA)	(NA)	(NA)	
1979 ASM	(NA)	161.4	10.2	19.4	106.2	192.8	587.5	765.8	14.6	137.4	(NA)	(NA)	(NA)	(NA)	(NA)	
1978 ASM	(NA)	156.8	10.7	19.6	105.4	344.6	402.4	747.0	718.4	129.7	(NA)	(NA)	(NA)	(NA)	(NA)	

See footnotes at end of table.

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years—Con.

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year <sup>1</sup>	Com- panies <sup>2</sup> (no.)	All establishments <sup>3</sup>		All employees		Production workers			Value added by manufac- ture <sup>4</sup> (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expendi- tures (million dollars)	End-of- year inven- tories <sup>4</sup> (million dollars)	Ratios	
		Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Spec- cial- ization (per- cent)	Cover- age (per- cent)
<b>INDUSTRY 2678, STATIONERY PRODUCTS<sup>6</sup>—Con.</b>															
1977 Census	221	242	109	12.6	135.2	9.8	18.5	91.0	291.0	364.4	651.7	15.9	118.2	86	80
1976 ASM	(NA)	(NA)	(NA)	12.3	124.3	9.5	18.4	83.2	306.8	355.8	652.9	712.7	113.2	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	12.1	114.6	9.3	18.0	72.9	256.4	314.8	591.3	715.5	103.3	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	13.3	115.5	10.4	20.6	79.0	305.9	323.7	604.6	8.0	130.9	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	15.0	112.5	11.7	22.3	77.3	242.0	257.9	493.1	6.5	102.0	(NA)	(NA)
1972 Census	406	431	131	14.7	106.3	11.5	22.3	72.6	225.6	230.5	450.5	9.3	88.4	85	82
<b>INDUSTRY 2679, CONVERTED PAPER PRODUCTS, N.E.C.<sup>8</sup></b>															
1987 Census	(NA)	785	305	30.7	625.5	22.3	45.3	395.7	1 858.3	1 824.8	3 672.1	75.6	612.8	91	89
1986 ASM	(NA)	(NA)	(NA)	28.4	571.1	20.7	41.2	361.4	1 588.6	1 665.0	3 222.5	73.0	625.9	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	29.3	556.4	21.6	42.0	353.0	1 595.7	1 575.2	3 136.2	70.4	569.2	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	31.6	568.7	23.5	45.2	365.5	1 651.5	1 596.4	3 195.7	70.1	547.5	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	31.7	523.5	23.5	44.6	341.6	1 431.9	1 400.9	2 816.8	36.2	469.7	(NA)	(NA)
1982 Census	742	809	317	30.4	496.3	22.3	43.7	314.4	1 291.3	1 336.0	2 637.7	74.3	444.9	88	82
1981 ASM	(NA)	(NA)	(NA)	33.3	524.3	24.6	48.8	232.8	1 361.4	1 507.6	2 836.2	57.9	502.6	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	35.2	488.3	26.2	51.2	312.5	1 213.8	1 360.5	2 553.3	76.5	437.4	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	34.7	445.7	26.4	51.7	293.0	1 073.2	1 217.4	2 262.9	92.9	404.3	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	35.1	436.5	26.0	50.7	277.4	1 027.7	1 120.5	2 126.4	92.8	363.2	(NA)	(NA)
1977 Census	799	871	318	34.3	383.9	25.9	51.7	249.8	988.0	977.4	1 937.8	62.0	302.2	89	83
1976 ASM	(NA)	(NA)	(NA)	28.1	313.6	21.0	42.6	201.2	758.5	754.0	1 506.6	35.2	223.9	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	27.0	269.5	20.2	41.0	171.2	650.8	640.3	1 300.6	37.0	218.9	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	29.6	269.7	22.5	46.3	179.8	638.6	658.9	1 284.4	49.8	241.4	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	27.6	229.1	21.6	43.0	156.2	544.5	468.2	1 001.1	33.4	170.1	(NA)	(NA)
1972 Census	323	356	219	24.2	188.4	19.0	37.8	128.3	426.2	368.4	793.4	25.5	116.2	86	79

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 2671, 3%; SIC 2672, 9%; SIC 2673, 9%; SIC 2674, 3%; SIC 2675, 11%; SIC 2676, 2%; SIC 2677, 6%; SIC 2678, 10%; and SIC 2679, 16%.

<sup>1</sup>In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. II, table 1a of the Industry chapter.

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during year.

<sup>4</sup>Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

<sup>5</sup>Industry definition is new for 1987 Census of Manufactures. An explanation of the Standard Industrial Classification revision will appear in the final industry series text that supersedes this report.

<sup>6</sup>Although there was no change in definition or content, the following 1982 industries were renumbered: Old SIC industry 2645, Die-Cut Paper and Board, became new SIC industry 2675; old SIC industry 2647, Sanitary Paper Products, became new SIC industry 2676; old SIC industry 2642, Envelopes, became new SIC industry 2677; and old SIC industry 2648, Stationery Products, became new SIC industry 2678.

<sup>7</sup>Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

<sup>8</sup>Industry was newly defined for 1987. It is composed of old SIC industries 2646, Pressed and Molded Pulp Goods, and 2649, Converted Paper Products, N.E.C.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987		1982	
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>
		Quantity <sup>2</sup>	Value (million dollars)	Quantity <sup>2</sup>	Value (million dollars)
2671- --	<b>PAPER COATING AND LAMINATING, PACKAGING</b>				
	Total	(NA)	(X)	32 488.7	(NA)
26711 --	Single-web paper (coated rolls and sheets, including waxed) for packaging uses	(NA)	(X)	464.1	
26711 11	Plastics-coated	1,000 s tons			
26711 15	Other	do	(NA)	*88.0	159.5
26711 00	Single-web paper, coated rolls and sheets, including waxed, for packaging uses, n.s.k.	do	(NA)	332.7	279.7
26712 --	Single-web film (coated rolls and sheets, including coextruded) for packaging uses	1,000 s tons	(NA)	24.9	
26712 11	Single-web film, coated	do	(NA)	753.0	(NA)
26712 12	Coextruded film		(NA)		(X)
26712 00	Single-web film, coated rolls and sheets, including coextruded, for packaging uses, n.s.k.	do	(NA)	258.9	180.4
				39.5	(NA)
				9	(S)
				(X)	143.1
					25.1
					-

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
2671- --	<b>PAPER COATING AND LAMINATING, PACKAGING—Con.</b>						
26713 --	Paper/paper multiweb laminations for packaging uses	(NA)	(X)	258.7	(NA)	(X)	182.3
26713 13	Polyethylene laminations:						
	Coated	1,000 s tons	(NA)	(S)	105.8		
	do	(NA)	44.8	46.4		19	**69.4
26713 14	Uncoated	do					74.7
26713 18	Other laminations:						
	Coated	1,000 s tons	(NA)	**8.6	13.5		
	do	(NA)	86.1	62.2		16	*100.8
26713 21	Uncoated	do					107.6
26713 00	Paper/paper multiweb laminations, for packaging uses, n.s.k.		(NA)	(X)	30.9	(NA)	(X)
26714 --	Multiweb laminated rolls and sheets, except paper/paper and foil, for packaging uses	(NA)	(X)	1 012.8	(NA)	(X)	544.8
26714 11	Film/paper multiweb laminations	1,000 s tons	(NA)	31.0	95.3	15	**35.7
26714 12	Film/film multiweb laminations:						
	Propylene/propylene	1,000 s tons	(NA)	40.3	205.9	23	(S)
	do	(NA)	(S)	9.6	15		92.6
26714 13	Cellophane/propylene	do	(NA)	**3.8	14.9	19	**15.4
26714 14	Cellophane/propylene	do	(NA)	13.3	67.8	13	(S)
26714 15	Metallized film/film laminations	do	(NA)	131.5	526.8	27	53.0
26714 16	Other film/film laminations	do	(NA)				50.3
26714 00	Multiweb laminated rolls and sheets, except paper/paper and foil, for packaging uses, n.s.k.		(NA)	(X)	92.5	(NA)	(X)
26710 --	Paper coating and laminating, packaging, n.s.k.		(NA)	(X)	3.1	(NA)	(X)
26710 00	Paper coating and laminating, packaging, n.s.k., typically for establishments with 10 employees or more (see note)		(NA)	(X)	3.1	(NA)	(X)
26710 02	Paper coating and laminating, packaging, n.s.k., typically for establishments with less than 10 employees (see note)		(NA)	(X)	3	(NA)	(X)
2672- --	<b>PAPER COATING AND LAMINATING, N.E.C.</b>						
	<b>Total</b>		(NA)	(X)	<sup>35</sup> 289.4	(NA)	(X)
26721 --	Printing paper coated at establishments other than where paper was produced		(NA)	(X)	393.6	(NA)	(X)
26721 13	Coated, one side (for labels and similar uses)	1,000 s tons	(NA)	(S)	235.1	39	(S)
26721 53	Coated, two sides (for printing of magazines, directories, catalogs, and similar uses)	do	(NA)	(S)	152.6	15	**78.7
26721 00	Printing paper coated at establishments other than where paper was produced, n.s.k.		(NA)	(X)	5.9	(NA)	(X)
26722 --	Gummed products:						
26722 00	Gummed products		(NA)	(X)	203.2	40	(X)
26723 --	Pressure-sensitive products:						
26723 00	Pressure-sensitive products		(NA)	(X)	3 074.6	140	(X)
26724 --	Other coated and processed papers, except for packaging uses		(NA)	(X)	1 056.7	(NA)	(X)
26724 45	Processed paper (embossed, leatherette, etc.)	1,000 s tons	(NA)	53.2	64.2	10	47.1
26724 51	Oiled and similarly treated paper	do	(NA)	10.0	10.4	10	**20.1
26724 53	Waxed and wax-laminated paper for nonpackaging uses, including household	do	(NA)	(S)	104.0	9	**34.3
26724 55	Carbonless paper	do	(NA)				59.2
26724 56	Plastics-coated paper	do	(NA)				
26724 59	Other coated and processed paper, including soap-impregnated paper but excluding sensitized paper	do	(NA)	(S)	837.0	(NA)	**558.8
26724 00	Other coated and processed papers, except for packaging uses, n.s.k.		(NA)	(X)	41.1	(NA)	(X)
26720 --	Paper coating and laminating, n.e.c., n.s.k.		(NA)	(X)	<sup>3</sup> 561.3	(NA)	(X)
26720 00	Paper coating and laminating, n.e.c., n.s.k., typically for establishments with 10 employees or more (see note)		(NA)	(X)	<sup>3</sup> 385.5	(NA)	(X)
26720 02	Paper coating and laminating, n.e.c., n.s.k., typically for establishments with less than 10 employees (see note)		(NA)	(X)	<sup>3</sup> 175.8	(NA)	(X)
2673- --	<b>BAGS: PLASTICS, LAMINATED, AND COATED</b>						
	<b>Total</b>		(NA)	(X)	<sup>44</sup> 043.8	(NA)	(X)
26731 --	Specialty bags and liners, single-web paper, coated:						
26731 00	Specialty bags and liners, single-web paper, coated	1,000 s tons	(NA)	(S)	400.4	39	*153.1
26732 --	Specialty bags and liners, single-web film						
26732 11	Polyethylene:						
	Grocery and variety	1,000 s tons	(NA)	*255.4	465.9	49	*137.1
	do	(NA)	563.4	872.3	51		277.9
26732 12	Refuse	do	(NA)	**60.8	107.2	44	**422.7
26732 13	Produce	do	(NA)	*208.4	115.0	33	572.0
26732 14	Textile and clothing	do	(NA)	*71.8	118.1	33	158.8
26732 15	Drum and box liners	do	(NA)				63.4
							95.2
							*94.3

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
2673- --	<b>BAGS: PLASTICS, LAMINATED, AND COATED—Con.</b>						
26732 --	Specialty bags and liners, single-web film—Con.						
26732 16	Polyethylene—Con.						
	Shipping sacks	1,000 s tons--	(NA)	*19.9	28.6	18	*22.2
26732 17	Household food storage (sandwich and freezer)	do--	(NA)	(S)	350.6	16	(S)
26732 18	Other	do--	(NA)	(S)	268.0	65	**307.1
26732 21	Coextruded film	do--	(NA)	(S)	148.9	14	**79.4
26732 23	Other film	do--	(NA)	(S)	106.1	25	(S)
26732 00	Specialty bags and liners, single-web film, n.s.k.	do--	(NA)	(S)	243.1	(NA)	(X)
26733 --	Specialty bags and liners, multiweb laminations and foil		(NA)	(X)	387.6		
26733 11	Paper combinations, except paper/foil	1,000 s tons--	(NA)	(S)	59.0		
26733 12	Foil and foil combinations	do--	(NA)	(S)	39.4	32	(S)
26733 14	Other multiweb laminations	do--	(NA)	(S)	276.7		222.1
26733 00	Specialty bags and liners, multiweb laminations and foil, n.s.k.		(NA)	(X)	12.5		
26730 --	Bags: plastics, laminated, and coated, n.s.k.		(NA)	(X)	*432.1	(NA)	(X)
26730 00	Bags: plastics, laminated, and coated, n.s.k., typically for establishments with 10 employees or more (see note)		(NA)	(X)	*265.2	(NA)	(X)
26730 02	Bags: plastics, laminated, and coated, n.s.k., typically for establishments with less than 10 employees (see note)		(NA)	(X)	166.9	(NA)	(X)
2674- --	<b>BAGS: UNCOATED PAPER AND MULTIWALL</b>						
	<b>Total</b>		(NA)	(X)	*2 341.3	(NA)	(X)
26741 --	Grocers' bags and sacks and variety and shopping bags, uncoated paper		(NA)	(X)	1 131.9	(NA)	(X)
26741 11	Grocers' bags and sacks, uncoated paper	1,000 s tons--	(NA)	1 657.9	916.4	29	**1 913.1
26741 12	Variety bags (merchandise), uncoated paper	do--	(NA)	123.1	106.7	26	*212.8
26741 13	Shopping bags, uncoated paper	do--	(NA)	35.0	60.8	4	*30.0
26741 15	Other uncoated paper bags, n.e.c. (mothproof, etc.), excluding specialty bags	do--	(NA)	(S)	24.7	12	**56.1
26741 00	Grocers' bags and sacks, variety, and shopping bags, uncoated paper, n.s.k.		(NA)	(X)	23.3	(NA)	(X)
26742 --	Shipping sacks and multiwall bags, all materials except textiles		(NA)	(X)	1 187.3	(NA)	(X)
26742 11	Single and double wall	1,000 s tons--	(NA)	*423.3	374.9	29	**131.3
26742 12	Multiwall (three plies or more)	do--	(NA)	**839.8	772.3	31	*794.0
26742 00	Shipping sacks and multiwall bags, all materials except textiles, n.s.k.		(NA)	(X)	40.1	(NA)	(X)
26740 --	Bags, uncoated paper and multiwall, n.s.k.		(NA)	(X)	*22.1	(NA)	(X)
26740 00	Bags, uncoated paper and multiwall, n.s.k., typically for establishments with 10 employees or more (see note)		(NA)	(X)	(4)	(NA)	(X)
26740 02	Bags, uncoated paper and multiwall, n.s.k., typically for establishments with less than 10 employees (see note)		(NA)	(X)	22.1	(NA)	(X)
2675- --	<b>DIE-CUT PAPER AND BOARD</b>						
	<b>Total</b>		(NA)	(X)	1 700.8	(NA)	(X)
26751 --	Die-cut paper and board office supplies:						
26751 00	Die-cut paper and board office supplies		(NA)	(X)	902.1	100	(X)
26752 --	Die-cut paper and board products except office supplies		(NA)	(X)	145.2	(NA)	(X)
26752 61	Cards, die-cut and designed, not printed	1,000 s tons--	(NA)	(S)	43.1	39	(S)
26752 97	Automotive board products (panel, trim, etc.)	do--	(NA)	(S)	(5)	5	*36.5
	Other, including fillers and flats for egg cases (except molded pulp), bottle caps, closures and lids; excluding labels	do--	(NA)	(S)	598.4	44	(S)
26752 00	Die-cut paper and board products (other than office supplies), n.s.k.		(NA)	(X)	3.7	(NA)	(X)
26753 --	Pasted, lined, laminated, or surface-coated paperboard:						
26753 00	Pasted, lined, laminated, or surface-coated paperboard	1,000 s tons--	(NA)	*646.2	468.1	60	*1 057.8
26750 --	Die-cut paper and paperboard, n.s.k.		(NA)	(X)	185.4	(NA)	(X)
26750 00	Die-cut paper and paperboard, n.s.k., typically for establishments with 10 employees or more (see note)		(NA)	(X)	91.7	(NA)	(X)
26750 02	Die-cut paper and paperboard, n.s.k., typically for establishments with less than 10 employees (see note)		(NA)	(X)	93.7	(NA)	(X)
2676- --	<b>SANITARY PAPER PRODUCTS</b>						
	<b>Total</b>		(NA)	(X)	11 071.1	(NA)	(X)
26761 --	Sanitary napkins and tampons		(NA)	(X)	1 355.1	(NA)	(X)
26761 14	Sanitary napkins, including maternity pads	millions	(NA)	12 598.8	1 074.3	7	13 213.3
26761 51	Tampons	do--	(NA)	2 861.0	269.3		
26761 00	Sanitary napkins and tampons, n.s.k.		(NA)	(X)	11.5	(NA)	(X)

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
<b>2676- --</b>	<b>SANITARY PAPER PRODUCTS—Con.</b>						
26763 —	Disposable diapers, except diaper liners, paper	(NA)	(X)	3 202.9	(NA)	(X)	2 158.5
26763 00	Disposable diapers, paper (usually contains pulp or cellulose fibers) millions	(NA)	15 248.9	3 202.9	8	15 862.3	2 158.5
26763 88	Disposable diapers (quantity of wood pulp and paper consumed in the manufacture of disposable diapers reported in code 26763 00 above) 1,000 s tons	(NA)	(S)	(X)	(NA)	(S)	(X)
26764 —	Sanitary tissue paper products	(NA)	(X)	6 412.5	(NA)	(X)	5 259.8
26764 11	Facial tissues and handkerchiefs, including sputum wipes 1,000 s tons	(NA)	310.7	729.8	15	(S)	584.4
26764 25	Table napkins, including plain creped and facial tissue type: Industrial (bulk and dispenser type): Regular type, single ply: Bulk 1,000 s tons	(NA)	*85.6	114.8	14	*157.0	206.1
26764 27	Dispenser do	(NA)	246.7	316.4	9	*139.4	170.5
26764 33	Facial tissue type, 2 ply or more do	(NA)	98.5	167.5	9	*67.9	107.6
26764 35	Retail packages (resale): Regular type, single ply 1,000 s tons	(NA)	122.3	156.3	17	*167.2	229.1
26764 37	Facial tissue type, 2 ply or more do	(NA)	95.7	202.4	14	**56.1	79.7
26764 41	Toilet tissue: Rolls and ovals: Industrial: Facial tissue type, 2 ply or more 1,000 s tons	(NA)	*258.1	317.6	15	*151.3	161.5
26764 43	Regular type, single ply do	(NA)	342.2	450.0	13	158.7	150.2
26764 45	Retail packages (resale): Facial tissue type, 2 ply or more 1,000 s tons	(NA)	721.0	1 106.5	14	522.0	643.7
26764 47	Regular type, single ply do	(NA)	255.6	332.6	12	719.0	1 003.9
26764 55	Interfolded and flat package do	(NA)	(*)	(*)	5	39.5	50.8
26764 71	Towels (rolled, folded, or interfolded): Industrial 1,000 s tons	(NA)	473.5	525.5	12	618.8	590.3
26764 76	Retail packages (resale): Single ply 1,000 s tons	(NA)	416.8	544.3	11	*262.8	328.3
26764 77	2 ply or more do	(NA)	700.5	803.0	13	*510.5	722.0
26764 81	Wipers (windshield, industrial, and lithographic plate), except nonwoven 1,000 s tons	(NA)	98.2	220.4	13	**99.1	141.9
26764 99	Other sanitary paper products, including absorbent pads, toilet seat covers, bibs, headrests, tray covers, etc. do	(NA)	(S)	*135.1	21	**37.9	79.1
26764 00	Sanitary tissue paper products, n.s.k. do	(NA)	(X)	290.3	(NA)	(X)	11.0
26760 —	Sanitary paper products, n.s.k.	(NA)	(X)	100.6	(NA)	(X)	40.1
26760 00	Sanitary paper products, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	78.8	(NA)	(X)	32.2
26760 02	Sanitary paper products, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	21.8	(NA)	(X)	7.9
<b>2677- --</b>	<b>ENVELOPES</b>						
	<b>Total</b>	(NA)	(X)	2 503.8	(NA)	(X)	1 751.6
26770 —	Envelopes, all types and materials:						
26770 00	Envelopes, all types and materials	(NA)	(X)	2 429.8	266	(X)	1 727.5
26770 02	Envelopes, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	74.0	(NA)	(X)	24.1
<b>2678- --</b>	<b>STATIONERY PRODUCTS</b>						
	<b>Total</b>	(NA)	(X)	1 127.4	(NA)	(X)	959.2
26781 —	Stationery:						
26781 00	Stationery	(NA)	(X)	297.9	84	(X)	261.8
26782 —	Tablets, pads, and related products:						
26782 00	Tablets, pads, and related products	(NA)	(X)	702.1	90	(X)	603.1
26780 —	Stationery products, n.s.k.						
26780 00	Stationery products, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	127.4	(NA)	(X)	94.4
26780 02	Stationery products, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	78.1	(NA)	(X)	67.0
		(NA)	(X)	49.3	(NA)	(X)	27.4

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
2679- --	<b>CONVERTED PAPER PRODUCTS, N.E.C.</b>						
	<b>Total</b>	(NA)	(X)	3 504.2	(NA)	(X)	2 678.4
26791 --	Wallcoverings	(NA)	(X)	527.5	(NA)	(X)	396.9
26791 21	Paper with less than 2 mils of coating:						
26791 23	Nonstrippable	mil sq yd	(NA)	(?)	(?)	19	35.5
	Dry strippable, nonwoven and combinations thereof	do	(NA)	(?)	(?)	19	85.6
26791 26	Paper-backed, coated or laminated with 2 mils of plastics or more:						
26791 28	Prepasted	mil sq yd	(NA)	(?)	(?)	21	49.8
	Nonpasted	do	(NA)	(?)	(?)		
26791 32	Fabric-backed, plastics-coated or laminated with:						
26791 33	Polymers of vinyl chloride:						
26791 35	Woven	mil sq yd	(NA)	(?)	(?)		
26791 41	Nonwoven	do	(NA)	(?)	(?)	20	185.9
26791 41	Other plastics, woven or nonwoven	do	(NA)	(?)	(?)		
26791 00	Other wallcoverings, including scenic and mural panel decorations but excluding wallcoverings of materials that do not contain some fabric or paper	do	(NA)	(?)	(?)	17	11.2
	Wallcoverings, n.s.k.		(NA)	(X)	(?)	(NA)	28.8
26792 --	Gift wrap paper						
	Gift wrap paper, all types and basic weights; plain, printed by any process, or decorated (including glitter, sequins, etc.), generally defined as retail counter items (including coated papers, but excluding laminations to foil):						
26792 82	Rolls	1,000 s tons	(NA)	(S)	478.8	29	73.3
26792 91	Folds	do	(NA)	(S)	91.2	12	17.9
26792 96	Other gift wrapping, including counter rolls and flat sheets for stores' own use, and paper gift wrap materials shipped to other manufacturers for further processing in preparing a complete put-up package	do	(NA)	3.5	19.0	15	**16.1
26792 00	Gift wrap paper, n.s.k.		(NA)	(X)	.9	(NA)	42.7
26793 --	Paper business machine supplies and other miscellaneous office supplies, n.e.c.						
26793 00	Paper business machine supplies and other miscellaneous paper office supplies, n.e.c.		(NA)	(X)	272.9	45	(X)
26794 --	Molded pulp goods:						
26794 00	Molded pulp goods		(NA)	(X)	294.3	14	(X)
26795 --	Other converted paper and board products						
	Novelties, games, displays, and similar products:						
26795 11	Fine crepe paper, excluding creped wrapping		(NA)	(X)	10.1	6	(S)
26795 22	Party and holiday goods and accessories		(NA)	(X)	102.1	17	(X)
26795 23	Other		(NA)	(X)	71.8		92.9
	Industrial paper and board products:						
26795 31	Cellulose insulation	mil cu ft	(NA)	(S)	59.2	77	(S)
26795 35	Laminated and tiled wallboard	mil sq ft 1/8 in	(NA)	(D)	(?)	4	(S)
	Miscellaneous paper products:						
26795 41	Doilies, place mats, and tray doilies (or tray covers)	1,000 s tons	(NA)	(S)	44.8	18	30.5
26795 45	Tags, unprinted	do	(NA)	(S)	6.6	20	31.8
26795 48	Folders and mounts, all types, except file folders	do	(NA)	(S)	40.2	10	(S)
	Paper filters:						
26795 51	Coffee		(NA)	(X)	65.0		
26795 55	All other		(NA)	(X)	10.9	14	(S)
26795 61	Paper wrapping products, n.e.c., including creped wadding and crepe paper, excluding fine crepe paper	1,000 s tons	(NA)	(S)	59.8	28	(S)
26795 69	Other miscellaneous paper and board products, including industrial products not elsewhere classified, labels (unprinted, except gummed), cigarette paper books, paper draperies, shelf paper (printed and unprinted), etc.						91.3
26795 00	Other converted paper and board products, n.s.k.		(NA)	(X)	8719.2	150	(S)
26790 --	Converted paper products, n.e.c., n.s.k.		(NA)	(X)	112.7	(NA)	101.8
26790 00	Converted paper products, n.e.c., n.s.k., typically for establishments with 10 employees or more (see note)		(NA)	(X)	517.5	(NA)	348.1
26790 02	Converted paper products, n.e.c., n.s.k., typically for establishments with less than 10 employees (see note)		(NA)	(X)	377.3	(NA)	302.7
			(NA)	(X)	140.2	(NA)	45.4

Note: In 1987 Census of Manufactures, data for establishments of small single unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

<sup>1</sup>Data reported by all producers, not just those with shipments of \$100,000 or more.

<sup>2</sup>For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: \* 10 to 19 percent estimated; \*\* 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

<sup>3</sup>Data for 1987 and 1982 are not completely comparable at the four-digit product level due to the 1987 Standard Industrial Classification (SIC) change which split old Industry 2641, Paper Coating and Glazing, into new industries 2671 and 2672. The "n.s.k." for industries 2671 and 2672 is included in industry 2672 since the information needed to correctly classify the "n.s.k." is not available.

<sup>4</sup>Data for 1987 and 1982 are not completely comparable at the four-digit product level due to the 1987 Standard Industrial Classification (SIC) change which split old industry 2643, Bags, Except Textile Bags, into new industries 2673 and 2674. The "n.s.k." for industries 2673 and 2674 is included in industry 2673 since the information needed to correctly classify the "n.s.k." is not available.

<sup>5</sup>For 1987, product code 2675271 is included with product code 2675297 to avoid disclosing data for individual companies.

<sup>6</sup>For 1987, product code 2676455 is included with product code 2676499 to avoid disclosing data for individual companies.

<sup>7</sup>Detailed 7-digit product data were not available in time for publication in this report. These data will be published in the final report which supercedes this report.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

<sup>a</sup>For 1987, product code 2679535 is included with product code 2679569 to avoid disclosing data for individual companies.

Table 3. Materials Consumed by Kind: 1987 and 1982

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity <sup>1</sup>	Delivered cost (million dollars)	Quantity <sup>1</sup>	Delivered cost (million dollars)
<b>INDUSTRY 2671, PAPER COATED AND LAMINATED, PACKAGING</b>					
	Materials, parts, containers, and supplies				
262108	Paper	(X)	1 376.4	(NA)	(NA)
289101	Glues and adhesives	461.1	358.1	(NA)	(NA)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	(S)	35.9	(NA)	(NA)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	**487.3	217.8	(NA)	(NA)
289301	Printing ink (complete formulations)	(X)	279.5	(NA)	(NA)
291106	Petroleum wax	(S)	55.0	(NA)	(NA)
265001	Paperboard containers, boxes, and corrugated paperboard	do	*28.8	12.7	(NA)
	Aluminum foil:				
335335	Plain	mil lb	(X)	15.9	(NA)
349702	Converted	do	**26.3	34.9	(NA)
970099	All other materials, parts, containers, and supplies		(X)	196.0	(NA)
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	170.6	(NA)
<b>INDUSTRY 2672, PAPER COATED AND LAMINATED, N.E.C.</b>					
	Materials, parts, containers, and supplies				
262108	Paper	(X)	2 397.8	(NA)	(NA)
289101	Glues and adhesives	(S)	1 118.0	(NA)	(NA)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	(S)	210.4	(NA)	(NA)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	(S)	102.2	(NA)	(NA)
289301	Printing ink (complete formulations)	(X)	59.5	(NA)	(NA)
291106	Petroleum wax	(S)	23.8	(NA)	(NA)
265001	Paperboard containers, boxes, and corrugated paperboard	do	(X)	9.0	(NA)
	Aluminum foil:				
335335	Plain	mil lb	(S)	125.5	(NA)
349702	Converted	do	(S)	5.7	(NA)
970099	All other materials, parts, containers, and supplies		(X)	3 542.2	(NA)
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	201.2	(NA)
<b>INDUSTRY 2673, BAGS: PLASTICS, LAMINATED, AND COATED</b>					
	Materials, parts, containers, and supplies				
262108	Paper	(X)	2 204.8	(NA)	(NA)
289101	Glues and adhesives	(S)	140.7	(NA)	(NA)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	**69.1	26.9	(NA)	(NA)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	**2 712.2	1 037.6	(NA)	(NA)
289301	Printing ink (complete formulations)	(X)	148.9	(NA)	(NA)
291106	Petroleum wax	(S)	**36.3	51.7	(NA)
265001	Paperboard containers, boxes, and corrugated paperboard	do	(X)	1.5	(NA)
	Aluminum foil:				
335335	Plain	mil lb	(D)	115.7	(NA)
349702	Converted	do	(D)	(3)	(NA)
970099	All other materials, parts, containers, and supplies		(X)	3 242.3	(NA)
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	439.5	(NA)
<b>INDUSTRY 2674, BAGS: UNCOATED PAPER AND MULTIWALL</b>					
	Materials, parts, containers, and supplies				
262108	Paper	(X)	1 513.0	(NA)	(NA)
289101	Glues and adhesives	2 547.4	1 191.2	(NA)	(NA)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	(S)	30.7	(NA)	(NA)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	244.0	78.8	(NA)	(NA)
289301	Printing ink (complete formulations)	(X)	29.7	(NA)	(NA)
291106	Petroleum wax	**31.2	41.1	(NA)	(NA)
265001	Paperboard containers, boxes, and corrugated paperboard	do	(D)	(D)	(NA)
	Aluminum foil:				
335335	Plain	mil lb	(X)	28.0	(NA)
349702	Converted	do	(D)	(D)	(NA)
970099	All other materials, parts, containers, and supplies		(X)	60.3	(NA)
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	50.6	(NA)

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982		
		Quantity <sup>1</sup>	Delivered cost (million dollars)	Quantity <sup>1</sup>	Delivered cost (million dollars)	
<b>INDUSTRY 2675, DIE-CUT PAPER AND BOARD</b>						
Materials, parts, containers, and supplies						
262108	Paper	1,000 s tons	(X)	1 016.4	(X)	
263104	Paperboard	do	(S)	402.4	**355.4	
265001	Paperboard containers, boxes, and corrugated paperboard		641.1	316.8	**983.6	
289101	Glues and adhesives	mil lb	(X)	34.4	(X)	
970099	All other materials, parts, containers, and supplies		(S)	14.1	(S)	
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	89.2	(X)	
				159.5	113.6	
					94.6	
<b>INDUSTRY 2676, SANITARY PAPER PRODUCTS</b>						
Materials, parts, containers, and supplies						
262108	Paper, all types	1,000 s tons	(X)	5 216.9	(X)	
2621A0	Tissue paper and other machine creped paper, produced and consumed at same location	do	*3 488.6	2 426.7	3 598.1	
261105	Woodpulp (air dry basis)	do	(S)	455.4	1 268.6	
289101	Glues and adhesives	mil lb	*875.2	123.1	*67.6	
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	do	*120.6	(S)	54.4	
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes		(X)	244.2	(X)	
229710	Nonwoven fabrics	mil sq yd	**4 980.6	235.5	*7 846.8	
265001	Paperboard containers, boxes, and corrugated paperboard		(X)	480.6	(X)	
970099	All other materials, parts, containers, and supplies		(X)	984.3	(X)	
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	212.7	(X)	
<b>INDUSTRY 2677, ENVELOPES</b>						
Materials, parts, containers, and supplies						
262108	Paper	1,000 s tons	(X)	1 241.4	(X)	
263104	Paperboard	do	(S)	845.3	**822.8	
265001	Paperboard containers, boxes, and corrugated paperboard		(S)	8.5	**9.4	
289101	Glues and adhesives	mil lb	(X)	55.0	(X)	
970099	All other materials, parts, containers, and supplies		*73.1	42.1	(S)	
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	150.7	30.3	
			(X)	139.8	86.8	
<b>INDUSTRY 2678, STATIONERY PRODUCTS</b>						
Materials, parts, containers, and supplies						
262108	Paper	1,000 s tons	(X)	616.8	(X)	
263104	Paperboard	do	*536.8	353.3	**447.3	
289101	Glues and adhesives	mil lb	122.5	50.8	*51.3	
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. (excluding sheets, rods, tubes, and shapes)	do	(S)	2.3	**4.8	
289301	Printing ink (complete formulations)	do	(D)	(D)	(D)	
			(S)	2.3	*4	
229710	Nonwoven fabrics	mil sq yd	(D)	(D)	(D)	
265001	Paperboard containers, boxes, and corrugated paperboard		(X)	30.7	(X)	
970099	All other materials, parts, containers, and supplies		(X)	39.8	(X)	
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	133.0	(X)	
<b>INDUSTRY 2679, CONVERTED PAPER PRODUCTS, N.E.C.</b>						
Materials, parts, containers, and supplies						
262108	Paper	1,000 s tons	(X)	1 555.2	(X)	
263104	Paperboard	do	(S)	569.3	**574.3	
190005	Waste paper, all types	do	**224.0	99.1	(S)	
289101	Glues and adhesives	mil lb	(S)	12.2	**540.8	
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. (excluding sheets, rods, tubes, and shapes)	do	(S)	12.3	(S)	
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes		(S)	11.9	*75.0	
289301	Printing ink (complete formulations)	mil lb	(X)	(4)	(X)	
229710	Nonwoven fabrics	mil sq yd	(S)	43.1	*27.2	
265001	Paperboard containers, boxes, and corrugated paperboard		(S)	6.1	(S)	
970099	All other materials, parts, containers, and supplies		(X)	53.4	(X)	
971000	Materials, parts, containers, and supplies, n.s.k. <sup>2</sup>		(X)	*252.7	*205.2	
			(X)	495.1	291.0	

<sup>1</sup>For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: \* 10 to 19 percent estimated; \*\* 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

<sup>2</sup>Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

<sup>3</sup>For 1987, material codes 335335 and 349702 are combined with material code 970099 to avoid disclosing data for individual companies.

<sup>4</sup>For 1987 and 1982, material code 308007 is combined with material code 970099 to avoid disclosing data for individual companies.



# APPENDIX

## Scope and Coverage and Explanation of Terms

### GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

### SCOPE AND COVERAGE

#### Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

#### Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

### EXPLANATION OF TERMS

**Number of establishments and companies**—A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

**All employees**—Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

**Production workers**—Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power-plant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

**Other employees**—Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

**Payroll**—Includes the gross earnings for the “employees” defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees’ Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

**Production-worker hours**—Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

**Cost of materials**—Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

**Specific materials consumed (table 3)**—In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers’ records. Establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as “not specified by kind” (n.s.k.).

**Value of shipments and other receipts**—Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all

miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of “all other costs” (including company overhead and profit).

**Shipments or production of individual products (table 2)**—In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

**Value added by manufacture**—This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

**Expenditures for new plant and equipment**—Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

**End-of-year inventories**—Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method.

Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

**Specialization and coverage ratios**—An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

**Specialization ratio**—Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

**Coverage ratio**—Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.











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